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Universe Horizon

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Abstract: *The universe in the light of diverse untouchable mass and wavelength has been discussed.*

Keywords: *Diverse untouchable mass and wavelength, mass and size of the universe*

1. Introduction

The universe in the light of diverse untouchable mass and wavelength will be discussed.

2. The Mass and Co-Mass of the Observable Universe

The mass value of the observable universe can be offered as the average of ten estimates of the total mass of the observable universe $m_1 = 2.9\ x\ 10^{54} kg$ [1].

In Heraclitean dynamics the co-mass m_2 can be attributed to the mass m_1 on the energy sustainable way so that the geometric mean of two masses gives the diverse untouchable mass m which nominally equals the factor $\sqrt{\frac{h}{c}}$ [2]:

$$m = \sqrt{m_1 m_2} = \sqrt{\frac{h}{c}}. \quad (1)$$

Here h and c is Planck constant and the speed of light, respectively.

Applying the equation (1) the co-mass of the observable universe m_2 is given:

$$m_2 = \frac{h}{c}\frac{1}{m_1} = 7.6\ x\ 10^{-97} kg. \quad (2)$$

3. The Wavelength of the Mass and Wavelength of the Co-Mass of the Observable Universe

The wavelength of the mass of the observable universe is the next:

$$\lambda_1 = \frac{h}{c}\frac{1}{m_1} = 7.6\ x\ 10^{-97} m. \quad (3)$$

It nominally equals the co-mass of the observable universe m_2.

And the wavelength of the co-mass of the observable universe is the next:

$$\lambda_2 = \frac{h}{c}\frac{1}{m_2} = 2.9\ x\ 10^{54}\ m. \quad (4)$$

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It nominally equals the mass of the observable universe m_1.

Thus the concerned nominal equality holds for the wavelength λ of the untouchable mass m, too:

$$\lambda = \sqrt{\lambda_1 \lambda_2} = \sqrt{\frac{h}{c}}. \quad (5)$$

4. The Size of the Observable Universe

The wavelength λ_2 of the co-mass m_2 of the observable universe can be regarded as the true range of the present universe. It is much bigger than the known diameter of the observable universe [3]:

$$\lambda_2 = 2.9\ x\ 10^{54}\ m \gg d_{observable\ universe} = 8.8\ x\ 10^{26} m. \quad (6)$$

5. CONCLUSION

Modesty seems to broaden horizons

DEDICATION

To modesty [4]

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